SECTOR UPDATE

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EV/Mobility Team

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Batteries (OVERWEIGHT)

US NDR takeaways; Positive ESS feedback

- Over Jul 13-16, L&F conducted a non-deal roadshow (NDR) and an analyst marketing campaign aimed at US investors.
- US investors expressed optimism towards the strong growth prospects of the US ESS market and the proactive market entry of Korean firms. However, concerns were raised about a potential supply glut.
- Despite the growing number of players entering the ESS space, US ESS production is unlikely to meet US ESS demand until after 2028. Given the first-mover advantages likely to accrue to early entrants, LG Energy Solution and L&F appear positioned as beneficiaries.

WHAT'S THE STORY?

L&F CFO NDR takeaways: L&F conducted a non-deal roadshow (NDR) targeting US investors over Jul 13-16. Investors paid close attention to the firm's imminent commercialization of LFP cathode materials (as L&F is not a Chinese firm) and its technological achievements (the first Korean company to successfully mass-produce both high-nickel and LFP cathode materials). Key questions focused on the competitiveness of its LFP cathode materials, the visibility of North American ESS demand, and intensifying competition in the high-nickel segment.

- **Point (1) Premium pricing for LFP cathode materials made by non-Chinese firms:** L&F's LFP cathode materials plant in Korea is scheduled to begin commercialization in 2H, and the plant is expected to primarily serve US demand. It is poised to become the first non-Chinese firm to begin commercially supplying LFP cathode materials to the US at scale. Initial production capacity is set at 30,000 tonnes, with plans to expand the site to 60,000 tonnes next year. We estimate that L&F's products will command a 30-40% price premium over Chinese alternatives. L&F plans to enhance its global cost competitiveness by shortening the calcination process and developing precursor-free products.

(Continued on the next page)

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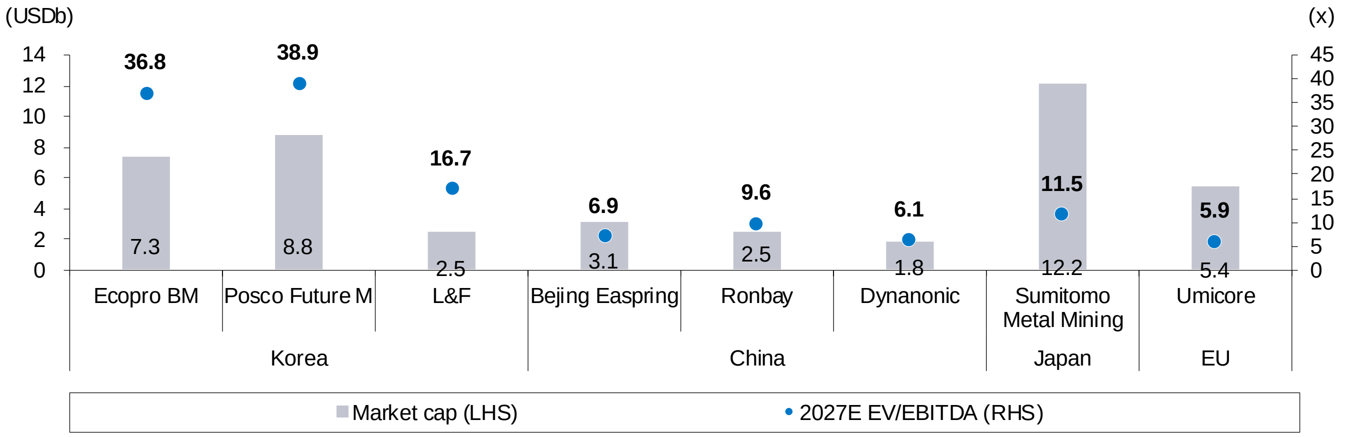
- **Point (2): PFE regulations clear demand visibility:** In March, L&F signed a long-term supply agreement with Samsung SDI for KRW1.61t, covering deliveries through end-2029 (with an optional three-year extension). We believe this contract equates to around 126,000 tonnes (over a contract period of 3 years and 3 months). Given L&F's planned capacity ramp-up—from 30,000 tonnes this year to 60,000 tonnes next year—this agreement represents an estimated 80% of its total production capacity. The 2025 amendment to the US Inflation Reduction Act (IRA) introduced stricter prohibited foreign entity (PFE) rules, requiring non-Chinese supply chains for ESS batteries. Tax incentives for ESS are available until end-2035, further clearing demand visibility for non-Chinese LFP cathode materials. Additionally, L&F's recent long-term agreement with US startup Coreshell—targeting mass-production of defense-grade batteries—is believed to stem from the defense industry's mandate to source non-China-based materials.
- **Point (3): Expanding 46-series production limits impact of dual sourcing:** L&F was the exclusive supplier of cathode materials for use in cylindrical battery applications at LG Energy Solution (LGES) through end-1H26. While some investors expressed concerns over LG Chem's planned re-entry into LGES's cathode-material supply chain from 2H, this risk should be mitigated by L&F's likely keeping its position as the exclusive supplier of cathode materials for LGES's 46-series cells. In 2026, LGES's 46-series production began at a capacity of 5 GWh. Next year, the initial ramp-up of its Arizona facility is expected to add 10 GWh (with phased expansions set to lift the figure to 44 GWh), bringing LGES's estimated global production capacity to 20 GWh (+5 GWh in Korea and +10 GWh in Arizona). As a result, L&F's growing sales of cathode materials for the 46-series should limit the impact of LG Chem's entry into LGES's cathode-material supply chain.

US investor marketing takeaways—reaffirmed positive sentiment towards ESS: Investors agreed that the US electricity supply-demand imbalance is driving robust growth of the ESS market. They also acknowledged the opportunity for Korean firms to capitalize on this by repurposing EV battery production facilities for ESS applications. However, some investors questioned whether the aggressive expansions of ESS capacity in North American could lead to an oversupply, as occurred in the EV battery sector, and inquired about the achievable profitability of ESS manufacturing in the US.

- **Point (1) US ESS production to meet ESS demand only after 2028:** LGES, Samsung SDI, Ford Energy, and SK On are all accelerating their plans to build ESS battery plants instead of new EV battery facilities. We project that US ESS battery production capacity will reach 141 GWh by early 2028 vs estimated 2028 ESS demand of 153 GWh. Given that ESS demand forecasts continue to be revised up, US ESS production is expected to meet US ESS demand after 2028.
- **Point (2) ESS generates 2.1x higher profit per kWh than EV batteries:** While LGES's operating margin in the US is slightly lower for ESS batteries (16%) than for EV batteries (17%; as its EV sales are cell-only and its ESS sales include full system integration), its operating profit per kWh is 112% (2.1x) higher for ESS batteries (USD36/kWh) than for EV batteries (USD17/kWh). This is because, in the US, LGES focuses on selling EV batteries as cells, whereas for ESS, it benefits from a vertically integrated value chain that spans the full system (unlike its competitors). As LGES shifts capacity from EV batteries to ESS batteries, profit-leverage effects are likely to strengthen further.

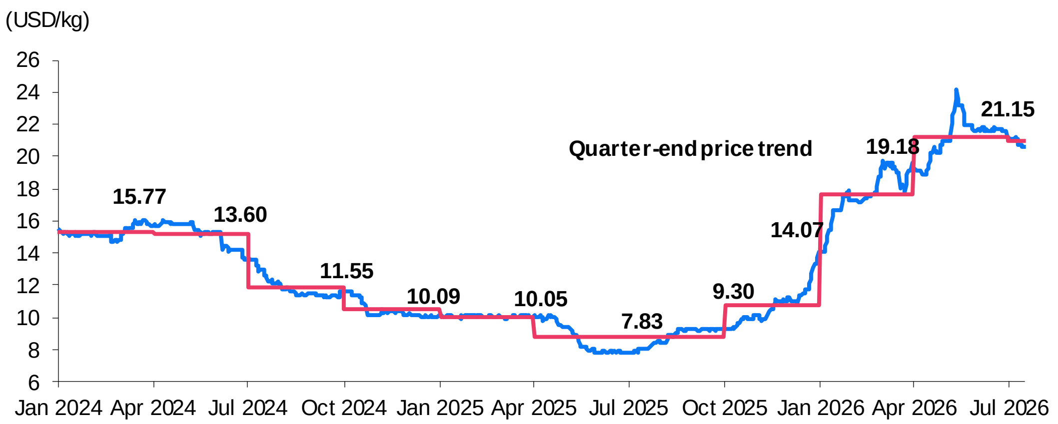
- **Point (3) Confirmation of high profitability to serve as near-term stock catalyst:** Since 2H25, multiple global battery manufacturers have announced plans to build new LFP battery lines for ESS, with LGES currently the only Korean company commercially operating such lines. Samsung SDI plans to commence production of its new LFP ESS facility in 4Q. Thus, the time is approaching to validate the profitability of ESS battery production—a development that could act as a near-term stock catalyst. In particular, LGES's profitability is expected to normalize in 3Q, following resolution of module and pack-assembly bottlenecks. If its profitability does improve as expected, investor sentiment towards ESS could transition from speculative optimism to confidence grounded in fundamentals, catalyzing the stock.

Global cathode material companies: 2027E EV/EBITDA



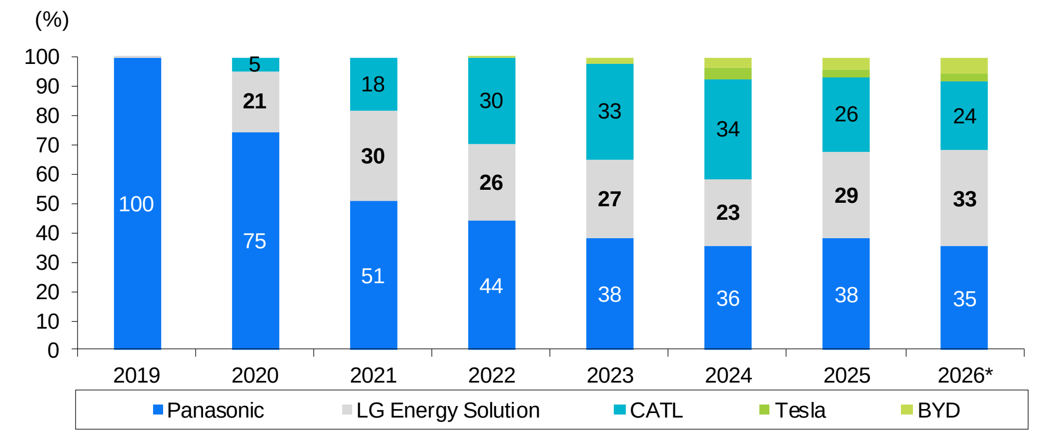
Source: Bloomberg, Samsung Securities

Chinese market: Lithium carbonate (99.5% min CIF China) price trend



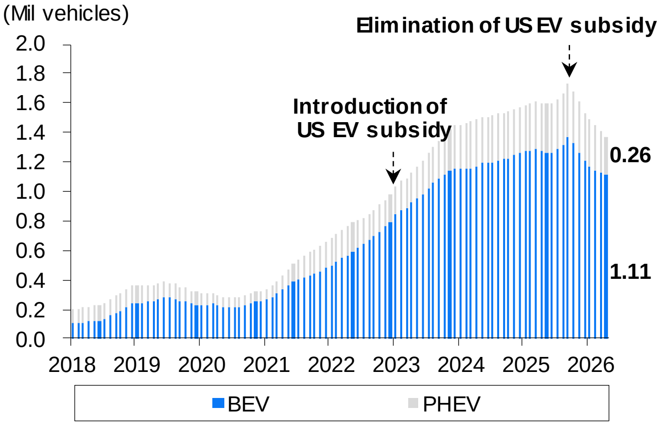
Source: Korea Mineral Resource Information Service (KOMIS), Samsung Securities

Companies supplying batteries to Tesla and portion of Tesla's needs they meet



Source: EV Volumes, Samsung Securities

US: EV sales trend (trailing 12 months)



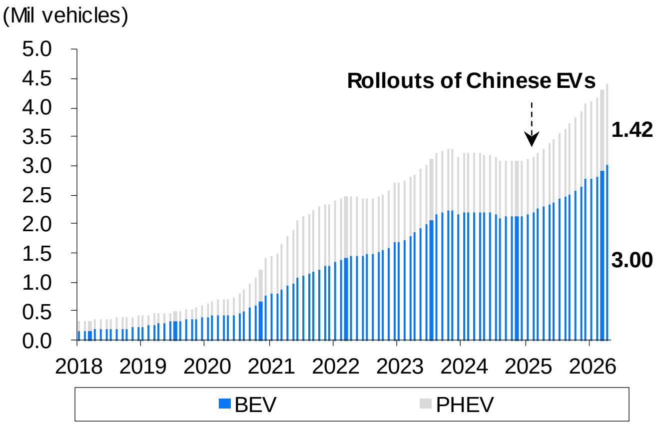
Source: EV Volumes, Samsung Securities

US: EV sales, by automaker

(Vehicles)	2025*	M/S (%)	2026*	M/S (%)	Growth (% y-y)
Tesla	147,988	30.1	136,600	41.9	-7.7
GM	47,030	9.6	36,651	11.3	-22.1
Toyota	28,789	5.9	32,275	9.9	12.1
Hyundai/Kia	38,653	7.9	29,135	8.9	-24.6
BMW	28,576	5.8	16,765	5.1	-41.3
Ford	32,892	6.7	13,741	4.2	-58.2
Rivian	10,900	2.2	12,890	4.0	18.3
VW Group	28,876	5.9	7,632	2.3	-73.6
Stellantis	46,749	9.5	7,511	2.3	-83.9
Volvo	15,065	3.1	7,185	2.2	-52.3
Mercedes-Benz	16,875	3.4	5,369	1.6	-68.2
Others	48,583	9.9	19,912	6.1	-59.0
Total	**490,976**	**100.0**	**325,666**	**100.0**	**-33.7**

Note: *January-April figures
Source: EV Volumes, Samsung Securities

EU: EV sales trend (trailing 12 months)



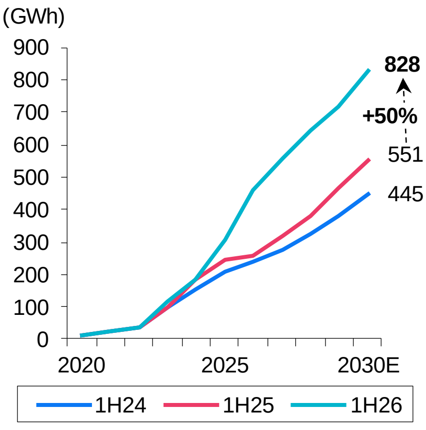
Source: EV Volumes, Samsung Securities

EU: 2026 EV sales, by automaker

(Vehicles)	2025*	M/S (%)	2026*	M/S (%)	Growth (% y-y)
VW Group	323,648	27.4	379,662	24.8	17.3
Stellantis	121,834	10.3	144,633	9.5	18.7
BMW	124,283	10.5	129,099	8.4	3.9
BYD	**41,940**	**3.6**	**102,171**	**6.7**	**143.6**
Hyundai/Kia	89,527	7.6	101,713	6.7	13.6
R-N-M Alliance	81,077	6.9	100,334	6.6	23.8
Mercedes-Benz	82,555	7.0	95,738	6.3	16.0
Tesla	61,326	5.2	90,344	5.9	47.3
Volvo/Polestar	79,276	6.7	75,884	5.0	-4.3
Ford	48,542	4.1	74,496	4.9	53.5
Toyota	44,510	3.8	52,328	3.4	17.6
Chery	**6,230**	**0.5**	**51,588**	**3.4**	**728.1**
Leapmotor	**4,772**	**0.4**	**33,009**	**2.2**	**591.7**
Others	70,853	6.0	98,497	6.4	39.0
Total	**1,180,373**	**100.0**	**1,529,496**	**100.0**	**29.6**

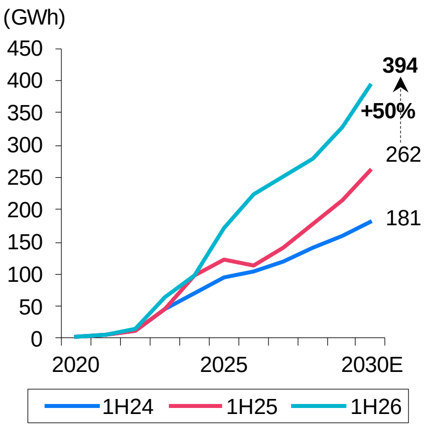
Note: *January-April figures
Bold entries indicate Chinese EV manufacturer
Source: EV Volumes, Samsung Securities

Global ESS demand forecast revision



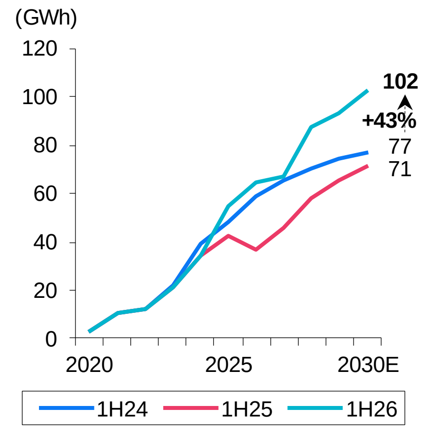
Source: Bloomberg NEF, Samsung Securities

China ESS demand forecast revision



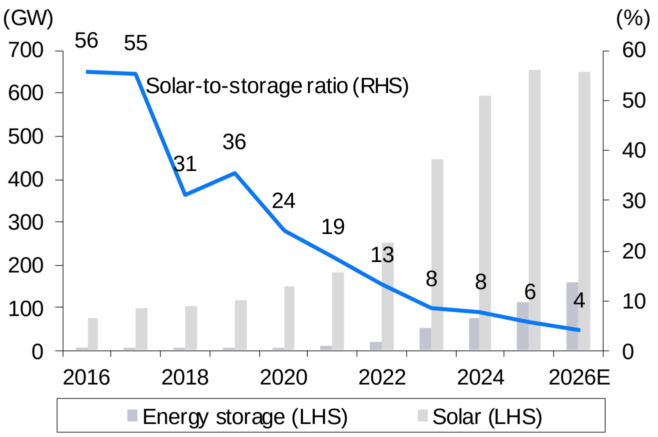
Source: Bloomberg NEF, Samsung Securities

US ESS demand forecast revision



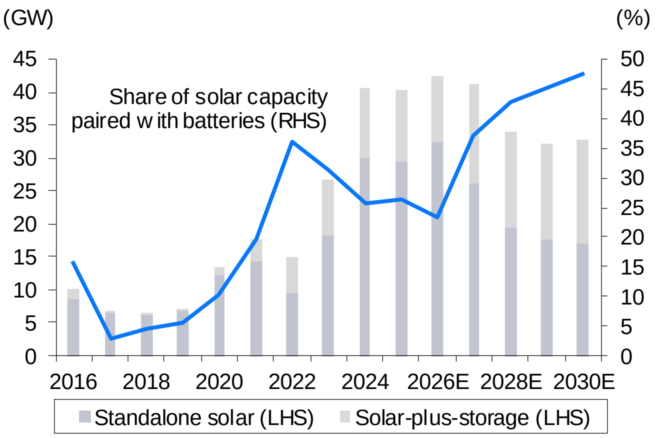
Source: Bloomberg NEF, Samsung Securities

Global solar-to-energy storage ratio



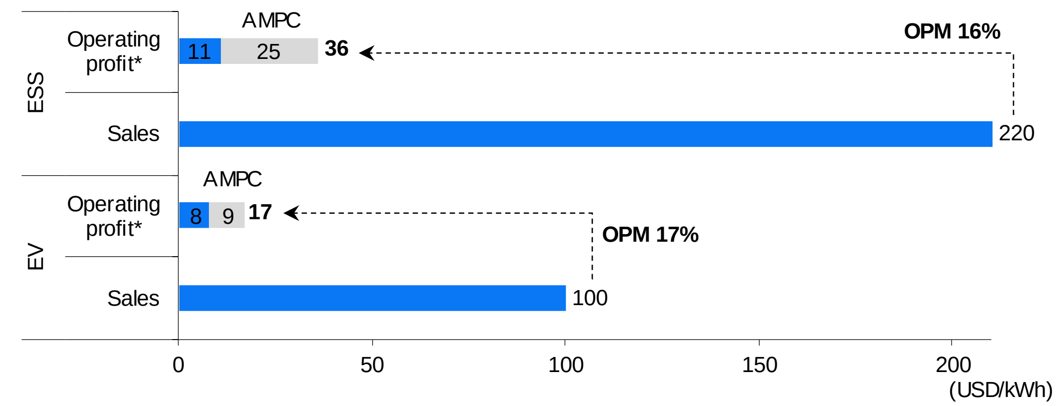
Source: Bloomberg NEF, Samsung Securities

US utility-scale solar capacity additions



Source: Bloomberg NEF, Samsung Securities

LG Energy Solution: Sales and operating profit in US, by business



Note: * Including AMPC which reflects only the portion that LGES actually retains
For sales figures, EV is based on battery cell sales and ESS is based on system sales
Source: Samsung Securities estimates

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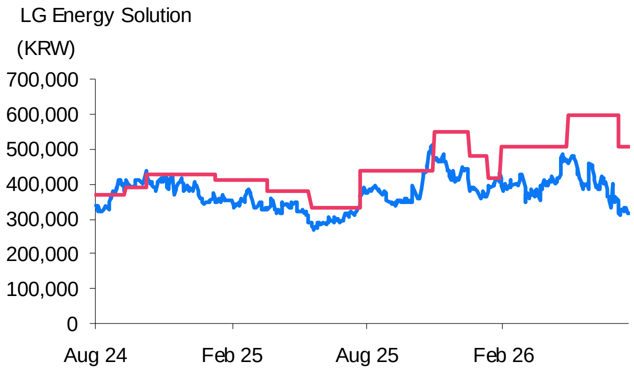

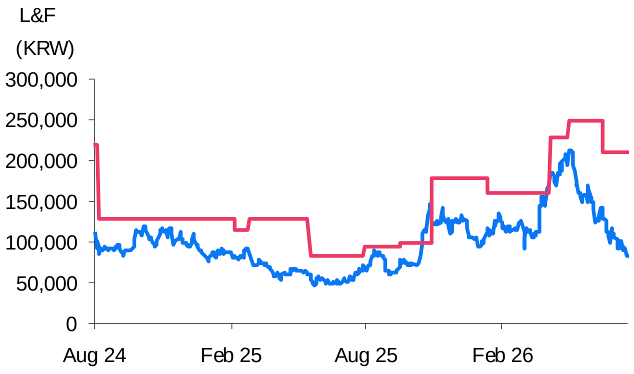

Rating changes over past two years (adjusted share prices)

LG Energy Solution

Date	2024/7/8	7/25	9/11	10/10	2025/1/10	3/21	5/19	7/25	10/31	12/18	2026/1/12	1/29
Recommendation	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	BUY	HOLD	HOLD	HOLD	BUY
Target price (KRW)	410000	370000	390000	430000	410000	380000	335000	440000	550000	480000	420000	510000
Gap* (average)	-15.22	-3.89	5.00	-9.14	-14.77	-12.67	-10.19	-12.74	-19.50	-21.65	-3.83	-20.82
(max or min)**	-8.54	11.35	0.38	-0.70	-5.98	-5.26	9.85	16.82	-11.91	-18.65	2.62	-5.00
Date	4/30	7/7										
Recommendation	BUY	BUY										
Target price (KRW)	600000	510000										
Gap* (average)	-32.15											
(max or min)**	-19.50											

L&F

Date	2024/4/12	8/7	2025/2/6	2/25	5/19	7/31	9/17	10/30	2026/1/13	4/7	5/4	6/18
Recommendation	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY
Target price (KRW)	220000	130000	115000	130000	83000	95000	100000	180000	160000	230000	250000	210000
Gap* (average)	-34.28	-25.00	-26.56	-48.64	-34.18	-22.96	-5.18	-33.95	-23.13	-17.90	-37.01	
(max or min)**	-22.00	-8.15	-20.26	-33.77	-13.25	-4.74	47.00	-21.33	6.63	-9.13	-15.00	

Note: * [(average, maximum, or minimum share price over duration of target price minus target price) / target price] x 100%
** Maximum/minimum share price if new target is higher/lower than market close on the business day prior to target price change

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Industry

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* Note: Effective Jul 27, 2023, BUY, HOLD, and SELL criteria are based on expectations of share-price moves of 15% or more within 12 months

Percentage of ratings in 12 months prior to 2026.06.30

BUY(85.5%)·HOLD(14.5%)·SELL(0%)

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